Amendment to the Claims:

The claims under examination in this application, including their current status and changes made in this paper, are respectfully presented.

1 (previously presented). A system for wavelet analysis of one or more time domain reflectometry (TDR) signals to determine one or more characteristics of one or more anomalies in a wire, the system comprising:

a library of one or more reference wavelet analysis results that each correspond to one or more known anomalies having one or more known characteristics; and

an analysis module operable to:

receive a TDR signal that has reflected back up a wire from an anomaly in the wire;

calculate a wavelet analysis result from a wavelet analysis of the TDR signal;

access the library;

compare the wavelet analysis result with one or more reference wavelet analysis results; and

responsive to the wavelet analysis result corresponding to one or more particular reference wavelet analysis results, indicate that the anomaly in the wire has one or more particular known characteristics of one or more particular known anomalies corresponding to the one or more particular reference wavelet analysis results.

2 (original). The system of claim 1, wherein the wavelet analysis result comprises a wavelet power spectrum of the TDR signal and the reference wavelet analysis results each comprise one or more reference wavelet power spectra.

3 (original). The system of claim 2, wherein a wavelet transform is used to calculate the wavelet power spectrum of the TDR signal.

4 (original). The system of claim 1, wherein a location of the anomaly is determined according to the TDR signal.

5 (original). The system of claim 1, wherein an integrated circuit (IC) package comprises the wire.

6 (previously presented). A method for wavelet analysis of one or more time domain reflectometry (TDR) signals to determine one or more characteristics of one or more anomalies in a wire, the method comprising:

receiving a TDR signal that has reflected back up a wire from an anomaly in the wire;

calculating a wavelet analysis result from a wavelet analysis of the TDR signal;

accessing a library of one or more reference wavelet analysis results that each correspond to one or more known anomalies having one or more known characteristics;

comparing the wavelet analysis result with one or more reference wavelet analysis results; and

responsive to the wavelet analysis result corresponding to one or more particular reference wavelet analysis results, indicating that the anomaly in the wire has one or more particular known characteristics of one or more particular known anomalies corresponding to the one or more particular reference wavelet analysis results.

7 (original). The method of claim 6, wherein the wavelet analysis result comprises a wavelet power spectrum of the TDR signal and the reference wavelet analysis results each comprise one or more reference wavelet power spectra.

8 (original). The method of claim 7, wherein a wavelet transform is used to calculate the wavelet power spectrum of the TDR signal.

9 (original). The method of claim 6, wherein a location of the anomaly is determined according to the TDR signal.

10 (original). The method of claim 6, wherein an integrated circuit (IC) package comprises the wire.

11 (currently amended). Software for wavelet analysis of one or more time domain reflectometry (TDR) signals to determine one or more characteristics of one or more anomalies in a wire, the software embodied in a computer-readable medium and when executed operable to:

receive a TDR signal that has reflected back up a wire from an anomaly in the wire; calculate a wavelet analysis result from a wavelet analysis of the TDR signal;

access a library of one or more reference wavelet analysis results that each correspond to one or more known anomalies having one or more known characteristics;

compare the wavelet analysis result with one or more reference wavelet analysis results; and

responsive to the wavelet analysis result corresponding to one or more particular reference wavelet analysis results, indicate that the anomaly in the wire has one or more particular known characteristics of one or more particular known anomalies corresponding to the one or more particular reference wavelet analysis results; and

~~if the wavelet analysis result of the TDR signal does not correspond to one or more reference wavelet analysis results, indicate that the anomaly in the wire lacks one or more known characteristics of one or more known anomalies corresponding to one or more reference wavelet analysis results in the library~~.

12 (original). The software of claim 11, wherein the wavelet analysis result comprises a wavelet power spectrum of the TDR signal and the reference wavelet analysis results each comprise one or more reference wavelet power spectra.

13 (original). The software of claim 11, wherein a location of the anomaly is determined according to the TDR signal.

14 (original). The software of claim 11, wherein an integrated circuit (IC) package comprises the wire.

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15 (previously presented). A system for wavelet analysis of one or more time domain reflectometry (TDR) signals to determine one or more characteristics of one or more anomalies in a wire, the system comprising:

means for receiving a TDR signal that has reflected back up a wire from an anomaly in the wire; means for calculating a wavelet analysis result from a wavelet analysis of the TDR signal;

means for accessing a library of one or more reference wavelet analysis results that each correspond to one or more known anomalies having one or more known characteristics;

means for comparing the wavelet analysis result with one or more reference wavelet analysis results; and

means for indicating that the anomaly in the wire has one or more particular known characteristics of one or more particular known anomalies corresponding to the one or more particular reference wavelet analysis results, responsive to the wavelet analysis result corresponding to one or more particular reference wavelet analysis results.

16 (previously presented). A system for wavelet analysis of one or more time domain reflectometry (TDR) signals to determine one or more characteristics of one or more anomalies in a wire, the system comprising:

a library of one or more reference wavelet power spectra that each correspond to one or more known anomalies having one or more known characteristics; and

an analysis module operable to:

receive a TDR signal that has reflected back up a wire from an anomaly in the wire;

calculate a wavelet power spectrum from a wavelet analysis of the TDR signal using a Morlet basis function;

access the library;

compare the wavelet power spectrum with one or more reference wavelet power spectra;

responsive to the wavelet power spectrum of the TDR signal corresponding to one or more particular reference wavelet power spectra, indicate that the

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anomaly in the wire has one or more particular known characteristics of one or more particular known anomalies corresponding to the one or more particular reference wavelet power spectra.

17 (previously presented). The system of claim 1, wherein the analysis module is further operable to:

indicate that the anomaly in the wire lacks one or more known characteristics of one or more known anomalies corresponding to one or more reference wavelet analysis results in the library, responsive to the wavelet analysis result not corresponding to one or more reference wavelet analysis results.

18 (previously presented). The method of claim 6, further comprising:

indicating that the anomaly in the wire lacks one or more known characteristics of one or more known anomalies corresponding to one or more reference wavelet analysis results in the library, responsive to wavelet analysis result not corresponding to one or more reference wavelet analysis results.

19 (previously presented). The software of claim 11, wherein the software when executed is further operable to:

indicate that the anomaly in the wire lacks one or more known characteristics of one or more known anomalies corresponding to one or more reference wavelet analysis results in the library, responsive to the wavelet analysis result not corresponding to one or more reference wavelet analysis results.

20 (previously presented). The system of claim 15, further comprising:

means for indicating that the anomaly in the wire lacks one or more known characteristics of one or more known anomalies corresponding to one or more reference wavelet analysis results in the library, responsive to the wavelet analysis result not corresponding to one or more reference wavelet analysis results.

21 (previously presented).   The system of claim 16, wherein the analysis module is further operable to:

indicate that the anomaly in the wire lacks one or more known characteristics of one or more known anomalies corresponding to one or more reference wavelet power spectra in the library, responsive to the wavelet power spectrum of the TDR signal not corresponding to one or more reference wavelet power spectra.

22 (new). The method of claim 6, wherein the indicating step comprises:

communicating results indicating that the anomaly in the wire has one or more particular known characteristics of one or more particular known anomalies corresponding to the one or more particular reference wavelet analysis results, responsive to the wavelet analysis result corresponding to one or more particular reference wavelet analysis results.

23 (new).   The software of claim 11, wherein the software when executed is further operable to:

communicate results indicating that the anomaly in the wire has one or more particular known characteristics of one or more particular known anomalies corresponding to the one or more particular reference wavelet analysis results, responsive to the wavelet analysis result corresponding to one or more particular reference wavelet analysis results.